

CLAIMS

What is claimed is:

Claim 1. A chemiluminescent reactant composition comprising:

a chemiluminescent reactant solution and a first particulate polymeric resin in amounts effective to yield a slurry upon admixture thereof; and

a second particulate polymeric resin in admixture with said slurry in an amount effective to yield a fluidizable solid admixture.

Claim 2. The composition of claim 1, wherein said fluidizable solid admixture is deagglomerated.

Claim 3. The composition of claim 1, wherein said fluidizable solid admixture is cured.

Claim 4. The composition of claim 1, wherein said fluidizable solid admixture is molded to form a specific shape.

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2       Claim 5. The composition of claim 1, wherein said  
3 first particulate polymeric resin is a polyvinyl chloride.  
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5       Claim 6. The composition of claim 1, wherein said  
6 second particulate polymeric resin is a polyvinyl chloride.  
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8       Claim 7. The composition of claim 6, wherein said  
9 second particulate polymeric resin is porous.  
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11       Claim 8. The composition of claim 6, wherein said  
12 second particulate polymeric resin has a mean particle size  
13 distribution sufficient to provide said fluidizable solid  
14 admixture.  
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16       Claim 9. The composition of claim 8, wherein said  
17 second particulate polymeric resin has an average particle  
18 size of about 125 microns.  
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20       Claim 10. The composition of claim 1, wherein said  
21 slurry is of a uniform dispersion.  
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1        Claim 11. The composition of claim 1, wherein said  
2 chemiluminescent reactant solution comprises an oxalate.

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4        Claim 12. The composition of claim 1, wherein said  
5 chemiluminescent reactant solution comprises an activator.

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7        Claim 13. A chemiluminescent composition comprising:  
8        a first chemiluminescent reactant component including a  
9 chemiluminescent reactant solution and a first particulate  
10 polymeric resin in amounts effective to yield a slurry upon  
11 admixture thereof and a second particulate polymeric resin  
12 in admixture with said slurry in an amount effective to  
13 yield a fluidizable solid admixture; and

14        a second chemiluminescent reactant component;  
15        wherein contact between said first and second  
16 chemiluminescent reactant components will result in  
17 generation of chemiluminescent light.

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19        Claim 14. The composition of claim 13, wherein said  
20 fluidizable solid admixture is deagglomerated.

1        Claim 15. The composition of claim 13, wherein said  
2 fluidizable solid admixture is cured.

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4        Claim 16. The composition of claim 13, wherein said  
5 fluidizable solid admixture is formed into a specific shape.

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7        Claim 17. The composition of claim 13, wherein said  
8 first particulate polymeric resin is a polyvinyl chloride.

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10       Claim 18. The composition of claim 12, wherein said  
11 second particulate polymeric resin is a polyvinyl chloride.

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13       Claim 19. The composition of claim 18, wherein said  
14 second particulate polymeric resin is a porous polyvinyl  
15 chloride.

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17       Claim 20. The composition of claim 18, wherein said  
18 second particulate polymeric resin has a mean particle size  
19 distribution sufficient to provide said fluidizable solid  
20 admixture.

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1        Claim 21. The composition of claim 13, wherein said  
2 slurry is of a uniform dispersion.

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4        Claim 22. The composition of claim 13, wherein said  
5 first chemiluminescent reactant component includes an  
6 oxalate and said second chemiluminescent reactant component  
7 includes an activator.

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9        Claim 23. The composition of claim 13, wherein said  
10 first chemiluminescent reactant component includes an  
11 activator and said second chemiluminescent reactant  
12 component includes an oxalate.

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14        Claim 24. The composition of claim 13, wherein said  
15 generation of light includes at least one distinct  
16 wavelength or color.

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18        Claim 25. The composition of claim 13, wherein said  
19 fluidizable solid admixture is controllably activated.

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21        Claim 26. A process for the production of a  
22 chemiluminescent reactant composition, comprising:

1 admixing a chemiluminescent reactant component with a  
2 first particulate polymeric resin in an amount effective to  
3 yield a slurry;

4 admixing a second particulate polymeric resin with said  
5 slurry, in an amount effective to yield a fluidizable solid  
6 admixture.

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8 Claim 27. The process of claim 26, wherein said first  
9 particulate polymeric resin is a polyvinyl chloride.

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11 Claim 28. The process of claim 26, wherein said second  
12 particulate polymeric resin is a polyvinyl chloride.

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14 Claim 29. The process of claim 28, wherein said second  
15 particulate polyvinyl chloride is porous.

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17 Claim 30. The process of claim 28, wherein said second  
18 particulate polyvinyl chloride has a mean particle size  
19 distribution sufficient to provide said fluidizable solid  
20 admixture.

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2       Claim 31. The process of claim 26, wherein said slurry  
3 is of a uniform dispersion.

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5       Claim 32. The process of claim 26, wherein said  
6 fluidizable solid admixture is cured.

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8       Claim 33. The process of claim 26, wherein said first  
9 chemiluminescent reactant component includes an oxalate.

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11       Claim 34. The process of claim 26, wherein said first  
12 chemiluminescent reactant component includes an activator.

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14       Claim 35. The process of claim 26, wherein said  
15 fluidizable solid admixture is deagglomerated.

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17       Claim 36. The process of claim 26, wherein said  
18 fluidizable solid admixture is formed into a specific shape.

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1           Claim 37. A multi-dimensional chemiluminescent device  
2 comprising:  
3           at least one first chemiluminescent reactant  
4 composition including a first chemiluminescent reactant  
5 component having a first particulate polymeric resin in an  
6 amount effective to yield a slurry and second particulate  
7 polymeric resin admixed to said slurry in an amount  
8 effective to yield at least one fluidizable solid admixture;  
9           wherein said at least one fluidizable solid admixture  
10 is dispersed within a multi-dimensional container, whereby  
11 densification of said fluidizable solid admixture causes  
12 formation of said multi-dimensional chemiluminescent device;  
13           whereby contacting said device with a second  
14 chemiluminescent reactant component will result in  
15 generation of chemiluminescent light.

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17           Claim 38. The composition of claim 37, wherein said  
18 fluidizable solid admixture is deagglomerated.

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20           Claim 39. The device of claim 37, wherein said  
21 fluidizable solid admixture is cured.



1        Claim 40. The device of claim 37, wherein said  
2 fluidizable solid admixture is formed into a specific shape.

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4        Claim 41. The device of claim 37, wherein said first  
5 particulate polymeric resin is a polyvinyl chloride.

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7        Claim 42. The device of claim 37, wherein said second  
8 particulate polymeric resin is a polyvinyl chloride.

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10       Claim 43. The device of claim 42, wherein said second  
11 particulate polyvinyl chloride is porous.

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13       Claim 44. The device of claim 42, wherein said second  
14 particulate polyvinyl chloride resin has a mean particle  
15 size distribution sufficient to provide said fluidizable  
16 solid admixture.

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18       Claim 45. The device of claim 37, wherein said slurry  
19 is of a uniform dispersion.

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21       Claim 46. The device of claim 37, wherein said first  
22 chemiluminescent reactant component includes an oxalate and

1 said second chemiluminescent reactant component includes an  
2 activator.

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4 Claim 47. The device of claim 37, wherein said first  
5 chemiluminescent reactant component includes an activator  
6 and said second chemiluminescent reactant component includes  
7 an oxalate.

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9 Claim 48. The device of claim 37, wherein said  
10 generation of light includes at least one distinct  
11 wavelength or color.

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13 Claim 49. The device of claim 37, wherein said  
14 densification provides a means to controllably activate said  
15 fluidizable solid admixture.

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17 Claim 50. The device of claim 37, wherein said  
18 densification of said fluidizable solid admixture is by a  
19 molding technique, wherein a hollow object is formed.

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